In Figs. 1 and 2, a board positioning part 1 comprises a θ-axis table 4 stacked on a moving table including an X-axis table 2 and a Y-axis table 3 and a Z-axis table 5 further disposed thereon. On the Z-axis table 5, a board holding part 7 for holding a board 6 held by a clamper 8 from a lower part is provided. The board 6 as an object to be printed is conveyed to the board positioning part 1 by a take-in conveyor 14 shown in Figs. 1 and 3. The board positioning part 1 is driven so that the board 6 is moved to X and Y directions and positioned at a below-described printing position and a board recognizing position. A take-out conveyor 15 conveys out the board 6 after the printing operation.

Above the board positioning part 1, a screen mask 10 is arranged. A mask plate 12 is mounted on a holder 11 to form the screen mask 10. The board 6 is positioned and abuts on the mask plate 12 from a lower part by the board positioning part 1. Within a solder printing range 6a on a circuit forming surface of the board 6, electrodes 6b, 6c, 6d and 6e for connecting together different kinds of electronic parts P1, P2, P3 and P4 are provided as shown in Fig. 4(a).

On the screen mask 10, a squeegee head 13 is arranged to freely reciprocate in the horizontal direction. While the board 6 abuts on the lower surface of the mask plate 12, cream solder 9 is supplied onto the mask plate 12 and the squeegees 13a of the squeegee head 13 are allowed to abut and slide on the surface

14
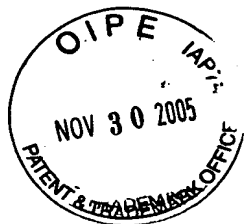
first column, the previous column does not exist. Accordingly, the connecting process is not performed.

Then, whether or not the visual field position is located in a terminal end of the direction of Y (ST7). Since the visual field position [1] does not exist in the terminal end of the direction of Y, the procedure advances to (ST9) to decide whether or not incomplete opening parts exist in the direction of Y. Then, when the incomplete opening parts are present in the direction of Y, the detected incomplete opening parts are registered as opening parts to be connected to store the positions and forms thereof (ST10).

Specifically, as shown in Fig. 14(a), the incomplete opening parts 16b(Y) corresponding to the pattern holes 16b are detected in the lower side in the image 20b. Then, the configurations of the incomplete opening parts 16b(Y) are decided and positions $x11$, $x12$ and $x13$ in the direction of X are obtained on the image to store these data.

Here, when the positions of opening parts to be connected are located in an upper edge side in a visual field, a connecting process is carried out in which opening parts to be connected that are already registered in a previous image pick-up visual field are connected to the opening parts to be connected that are registered in the image of this image pick-up visual field. In the example shown in Fig. 14(a), since the incomplete opening parts 16b(Y) are detected only in the lower edge side, the

31

registered as the opening parts to be connected in this image, and then, a connecting process is carried out in which the opening parts to be connected that are already registered in the image obtained in the adjacent image pick-up visual filed in the edge of the image in which the opening parts to be connected are detected and correspond to the opening parts to be connected are connected to the opening parts to be connected to form complete openings respectively. Accordingly, the inspecting data can be simply and efficiently formed.

As described above, according to the present invention, in the mask data obtaining step for obtaining the positions or the configurations of the opening parts by picking-up the image of the mask plate, when the image pick-up visual field of the camera is sequentially moved to a plurality of visual field positions set to the mask plate in a prescribed moving sequence, if the incomplete opening parts partly protruding from the image obtained in one image pick-up visual field are detected, a process for obtaining the complete opening parts to which the incomplete opening parts belong is performed based on the detected result. Therefore, the inspecting data can be simply and efficiently formed.